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| 09/960,487      | 09/24/2001  | Hiroyuki Shimizu     | 214056US0 CONT      | 6804             |

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EXAMINER

JACKSON, MONIQUE R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 02/13/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,487

Applicant(s)

SHIMIZU ET AL

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/190,264.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The preliminary amendment filed 9/24/01 has been entered. Claims 2 and 11 have been canceled. New claim 13 has been added. Claims 1, 3-10 and 12-13 are pending in the application.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-10 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "hydrocarbon" in claims 1,3- is used by the claim for a compound consisting "of atoms selected from the group consisting of hydrogen, carbon, oxygen, nitrogen, sulfur, phosphorus and metal atoms", " while the accepted meaning is "any compound containing **only hydrogen and carbon**" (emphasis added.) (*Webster's New World Dictionary of American English*, Third College Edition, 1988.) Hence, given that the instantly claimed invention includes atoms that are not hydrogen or carbon as part of the "hydrocarbon compound", the Applicant's use of the term "hydrocarbon" is repugnant to its accepted meaning and hence it is unclear whether the Applicant's intent is to claim a hydrocarbon compound or a compound meeting the limitations as recited.

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*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 9, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katono et al (USPN 3,915,869) in view of King (USPN 4,211,662) and in further view of Heimann et al (USPN 6,010,984.) Katono et al teach a metal forming lubricant, such as for metal wires, which forms a film on the metal surface that has high power lubricating properties, good anti-corrosion properties, and is well adapted for welding (Abstract; Col. 1, lines 13-33.) The lubricant comprises a mixture of surface-active agents such as aliphatic acid salts in carboxylic acid soap of the formula  $\text{RCOONa}$  ( $\text{K}, \text{NH}_4$ ), where  $\text{R}=\text{C}_8\text{-C}_{22}$ ; a water-soluble synthetic resin; and 1-50 parts of a water-soluble or water-emulsifiable lubricating oil for each 100 pts of the mixture of surface-active agent and water soluble resin; wherein the preferred water-soluble surface-active agents being saturated aliphatic acid salts having 8 to 22 carbon atoms such as a mixture comprising capric acid and lauric acid; and the water-soluble resins include alkyd resins such as linseed oil, coconut oil or castor oil modified alkyd resin (Col. 1, lines 48-56; Col. 2, lines 34-45; Col. 3, lines 4-16.) Katono et al do not teach utilizing molybdenum disulfide ( $\text{MoS}_2$ ), tungsten disulfide ( $\text{WS}_2$ ), polytetrafluoroethylene (PTFE) or carbon graphite lubricating particles as instantly claimed, however, it is well known in the art that these lubricating particles are conventionally utilized as extreme pressure additives in lubricating compositions, as taught by King or Heimann et al, and would have been obvious to

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one having ordinary skill in the art at the time of the invention. King specifically teaches that  $\text{MoS}_2$  or  $\text{WS}_2$  are known additives to provide lubricating compositions with improved protection under extreme pressure conditions and particularly teaches a synergetic additive comprising  $\text{MoS}_2$  for lubricating compositions of all types of greases and oils including lithium or aluminum complex greases or naphthenic or aromatic oils (Abstract; Col. 1, lines 5-40; Col. 3, lines 3-32; Claims.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate  $\text{MoS}_2$  as taught by King or Heimann et al as an extreme pressure additive in the lubricating composition taught by Katono et al. Further, it would have been obvious to one having ordinary skill in the art to determine the optimum amount of lubricating composition to provide per 10kg of wire given that the amount of lubricating composition is a result-effective variable affecting the lubricity of the metal wire.

6. Claims 1, 5-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-122974A (JP'974) in view of Van Der Veer et al (USPN 6,068,918.) JP'974 teaches a welding wire coated on the surface with 0.01-0.6g  $\text{MoS}_2$  and/or  $\text{WS}_2$ , 0.01-0.15g of one or more metal soaps, and 0.01-0.15 g lanolin oil, per 10kg of wire but do not specifically teach that the metal soap is a metal soap of an acid as instantly claimed (Abstract). However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any known species of metal soap commonly utilized in the art, wherein Van Der Veer et al specifically teaches that metal salts of aromatic acids and naphthenic acid are preferred metal soaps utilized in coating metal cords to provide enhanced corrosion resistance (Col. 5.) as taught by Van Der Veer et al for the invention taught by JP'974. Further, it would have been obvious to one having ordinary skill in the art to determine the optimum amount of lubricating composition

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to provide per 10kg of wire given that the amount of lubricating composition is a result-effective variable affecting the lubricity of the metal wire.

7. Claims 1, 3-4, 9-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-122974A (JP'974) in view of Katono et al. JP'974 teaches a welding wire coated on the surface with 0.01-0.6g MoS<sub>2</sub> and/or WS<sub>2</sub>, 0.01-0.15g of one or more metal soaps, and 0.01-0.15 g lanolin oil, per 10kg of wire but do not specifically teach that the metal soap is a metal soap of an acid as instantly claimed (Abstract). However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any known species of metal soap commonly utilized in the art, wherein Katono et al specifically teach the use of sodium or potassium metal soaps of carboxylic acids comprising 8 to 22 carbon atoms. Therefore, it would have been obvious to one having ordinary skill in the art to utilize a sodium or potassium metal salt of carboxylic acids of 8 to 22 carbon atoms as taught by Katono et al for the invention taught by JP'974. Further, it would have been obvious to one having ordinary skill in the art to determine the optimum amount of lubricating composition to provide per 10kg of wire given that the amount of lubricating composition is a result-effective variable affecting the lubricity of the metal wire.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 3-10 and 12-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,337,144 (USPN '144) in view of JP51-144353 A (JP'353.) Though the claims are not identical they are not patentably distinct. As in the instant application, USPN '144 also claims a welding wire with a surface deposit comprising at least one lubricating particle and optional oils as instantly claimed, but USPN '144 particularly claims a metal salt of naphthenic acid. However, naphthenic acid is an obvious species of a cyclic structure acid and hence reads on the instantly claimed invention. Further, it is well known in the art that naphthenic acid or metal salts thereof and fatty or carboxylic acids or metal salts thereof, particularly comprising greater than 8 carbon atoms, are known functional equivalents in the art, as evidenced by JP'353, and hence, it would have been obvious to one having ordinary skill in the art to utilize the broad genus as instantly recited or to substitute the fatty or carboxylic acids and metal salts thereof as instantly claimed for the naphthetic acid or metal salt thereof as claimed in USPN '144.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inoue et al (USPN 6,079,243) teaches a welding wire produced by applying a lubricating deposit to the surface of the wire wherein the deposit includes MoS<sub>2</sub> or WS<sub>2</sub> or both in combination with lubricating oils including animal fats, vegetable oils, mineral oils, or synthetic oils in a sum of at least 0.3 g/10kg of wire weight with an example utilizing a

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lubricating deposit comprising a mixture including potassium soap, PTFE, graphite and  $\text{MoS}_2$  and/or  $\text{WS}_2$ . It is also noted that the data presented in the Tables 8-1 to 8-7 and 9-1 to 9-6 do not appear to provide a conclusive showing of unexpected results with regards to an acid compound or metal salt thereof having 5 to 12 carbon atoms given that the data presented does not provide a direct comparison between a compound within the carbon number range to those outside the range, i.e. all parameters (metal type, wire type, oil, lubricating particle, amounts, etc.) held constant with the exception of the carbon chain length.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



mrj

February 11, 2002



Paul Thibodeau  
Supervisory Patent Examiner  
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